IN THE CLAIMS

Please cancel claims 1-8. Please add claims 9-32. A complete listing of the claims is shown below.

1. – 8. (Cancelled)

9.   (New) A receiver unit in a multiple-input multiple-output (MIMO) communication system, comprising:

at least one front end processor configured to receive at least one signal received via different spatial channels;

a MIMO processor coupled to the at least one front end processor and configured to provide estimates of at least some symbols in the at least one signal; and

a channel quality estimator coupled to the MIMO processor and configured to estimate characteristics of a plurality of transmission channels used for data transmission and to provide signal-to-noise and interference (SNR) information for one or more of the different spatial channels; and

a transmit data processor configured to receive and process the SNR information for transmission.

10.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information for each subcarrier of an Orthogonal Frequency Division Multiplexed (OFDM) signal received at the receiver based upon an average of SNR information over all of the different spatial channels.

11.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information based upon an average of SNR information over a plurality of subcarriers of an Orthogonal Frequency Division Multiplexed (OFDM) signal received at the receiver.

12.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information based upon an average of SNR information over all of the different spatial channels.

13.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information based upon an average of SNR information for pilot signals received over all of the different spatial channels.

14.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information based upon an average of SNR information for pilot signals received over all of the different spatial channels.

15.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information based on a correlation matrix inversion (CCMI) processing.

16.   (New) The receiver unit of claim 9, wherein the channel quality estimator is configured to provide the SNR information based minimum mean square error (MMSE) processing.

17.   (New) A receiver unit in a multiple-input multiple-output (MIMO) communication system, comprising:

        means for receiving at least one signal received via different spatial channels;

        means for providing estimates of at least some symbols in the at least one signal; and

        means for providing signal-to-noise and interference (SNR) information for one or more of the different spatial channels; and

        a transmit data processor configured to receive and process the SNR information for transmission.

18.   (New) The receiver unit of claim 17, wherein the means for providing SNR information comprises means for providing SNR information for each subcarrier of an Orthogonal Frequency

Division Multiplexed (OFDM) signal received at the receiver based upon an average of SNR information over all of the different spatial channels.

19.   (New) The receiver unit of claim 17, wherein the means for providing SNR information comprises means for providing SNR information based upon an average of SNR information over a plurality of subcarriers of an Orthogonal Frequency Division Multiplexed (OFDM) signal received at the receiver.

20.   (New) The receiver unit of claim 17, wherein the means for providing SNR information comprises means for providing SNR information based upon an average of SNR information over all of the different spatial channels.

21.   (New) The receiver unit of claim 17, wherein the means for providing SNR information comprises means for providing SNR information based upon an average of SNR information for pilot signals received over all of the different spatial channels.

22.   (New) The receiver unit of claim 17, wherein the means for providing SNR information comprises means for providing SNR information based upon an average of SNR information for pilot signals received over all of the different spatial channels.

23.   (New) The receiver unit of claim 17, wherein the means for providing SNR information comprises means for providing SNR information based on a correlation matrix inversion (CCMI) processing.

24.   (New) The receiver unit of claim 17, the means for providing SNR information comprises means for providing SNR information based minimum mean square error (MMSE) processing.

25.   (New) A method for providing signal-to-noise and interference (SNR) for feedback in a wireless communication system, comprising:

        receiving at least one signal received via different spatial channels;

providing estimates of at least some symbols in the at least one signal; and

providing signal-to-noise and interference (SNR) information for one or more of the different spatial channels; and

processing the SNR information for transmission.

26.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information for each subcarrier of an Orthogonal Frequency Division Multiplexed (OFDM) signal received at the receiver based upon an average of SNR information over all of the different spatial channels.

27.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information based upon an average of SNR information over a plurality of subcarriers of an Orthogonal Frequency Division Multiplexed (OFDM) signal received at the receiver.

28.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information based upon an average of SNR information over all of the different spatial channels.

29.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information based upon an average of SNR information for pilot signals received over all of the different spatial channels.

30.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information based upon an average of SNR information for pilot signals received over all of the different spatial channels.

31.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information based on a correlation matrix inversion (CCMI) processing.

32.   (New) The method of claim 25, wherein providing SNR information comprises providing SNR information based minimum mean square error (MMSE) processing.